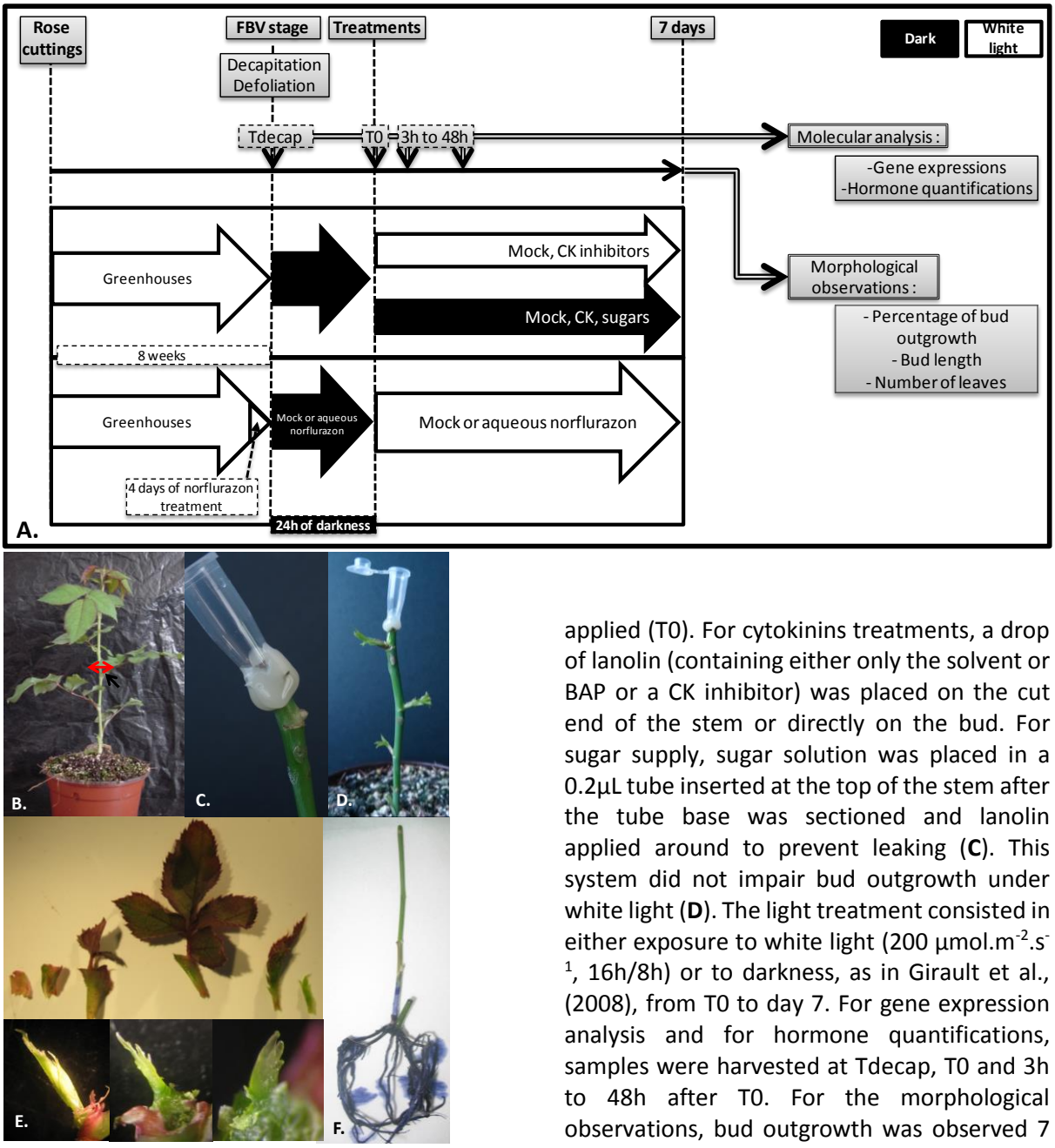

Figure S4: Experimental procedures used.
Rose plants are grown from cuttings in greenhouse until the early flowering stage (FBV for floral bud visible (**A**)). Plants are decapitated and defoliated before being placed under darkness in an opaque bag for 24h (Tdecap) in order to separate the effect of decapitation from the effect of light exposure onto early molecular processes of bud outgrowth (**A**). Plants at the FBV stage, the site of decapitation (red arrow) and the studied bud (black arrow) are shown in **B**. Then, light and chemical treatments were applied (T0). For cytokinins treatments, a drop of lanolin (containing either only the solvent or BAP or a CK inhibitor) was placed on the cut end of the stem or directly on the bud. For sugar supply, sugar solution was placed in a 0.2µL tube inserted at the top of the stem after the tube base was sectioned and lanolin applied around to prevent leaking (**C**). This system did not impair bud outgrowth under white light (**D**). The light treatment consisted in either exposure to white light (200 $\mu mol.m^{-2}.s^{-1}$, 16h/8h) or to darkness, as in Girault et al., (2008), from T0 to day 7. For gene expression analysis and for hormone quantifications, samples were harvested at Tdecap, T0 and 3h to 48h after T0. For the morphological observations, bud outgrowth was observed 7 days after the treatments and the percentage of bud outgrowth, bud length (mm) and organogenesis (number of new leaf primordia produced in 7 days, as determined through bud dissection as shown in **E**) were measured. For experiments using methylene blue, potting mix was removed from the roots and roots were soaked in a methylene blue solution after light or dark treatment and during 3h before observation (**F**). For norflurazon experiments, buds were treated 4 days before the FBV stage with lanolin paste containing norflurazon and with a norflurazon solution supplied as for sugar treatments, from decapitation and during 7 days.